

said backing being made from a formulation comprising a dispersion of said fire retardant components and said binder in a solvent having water as the major proportion; and said formulation being coated on said carpet fibers and cured to provide said fire resistant carpet.

~~2~~ 18. The carpet according to claim ~~17~~, wherein the fibers of said carpet include nylon fibers.

~~3~~ 19. The carpet according to claim ~~18~~, wherein said standards for smoke generation and toxic gas emissions are the Airbus ATS 1000.001/ABD 0031 issue 5 smoke emission and toxic gas standards.

~~4~~ 20. The carpet according to claim ~~18~~ which when tested in accordance with the Airbus ATS 1000.001/ABD 0031 issue 5 smoke emission test methods, said carpet produces a resulting smoke with a specific optical density not greater than 200.

~~5~~ 21. The carpet according to claim ~~18~~, wherein the flammability standard is the twelve second vertical burn test in FAR 25.853(a), Appendix F, Part 1, (a)(1)(ii).

~~6~~ 22. The carpet according to claim ~~17~~, wherein said formulation further comprises a grinding aid mixed therein.

7 23. The carpet according to claim 17, wherein said formulation further comprises a surfactant mixed therein.

8 24. The carpet according to claim 17, wherein said formulation further comprises a pigment mixed therein.

9 25. The carpet according to claim 17, wherein said formulation further comprises a filler mixed therein.

10 26. The carpet according to claim 17, wherein the fire retardant spumescent is melamine.

11 27. The carpet according to claim 17, wherein the catalyst is an ammonium polyphosphate.

12 28. The carpet according to claim 17, wherein the char former is a pentaerythritol.

13 29. The carpet according to claim 17, wherein the char former is a polysaccharide.

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~~30.~~ The carpet according to claim ~~17~~, wherein said polymeric binder is a polyurethane.

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~~31.~~ The carpet according to claim ~~30~~, wherein the polyurethane is selected from the group consisting of a polyurethane polyether, a polyurethane polyester and mixtures thereof.

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~~32.~~ The carpet according to claim ~~30~~, wherein the polyurethane is selected from the group consisting of an aliphatic polyurethane, an aromatic polyurethane and mixtures thereof.

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~~33.~~ The carpet according to claim ~~30~~, wherein the polyurethane solids are about 7-12% by weight of said formulation.

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~~34.~~ The carpet according to claim ~~17~~, wherein the fire retardant components are about 39-61% by weight of said formulation.

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~~35.~~ The carpet according to claim ~~17~~, wherein the solvent is at least about 22% by weight of said formulation.

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36. The carpet according to claim 30, wherein said formulation comprises by

weight:

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Component	% Range
solvent-free anionic aliphatic polyurethane dispersion in water	18-30
water	5-15
2-Propanol	3-6
N-Methyl-2-Pyrrolidone	1-4
Acetylenic, diol-based dispersing agent	0.5-1.5
Polysaccharide resin	4-9
Melamine	7-13
Ammonium polyphosphate	25-35
Pentaerythritol	7-13
black iron oxide	0.5-1.5
defoamer	.01-1.0
ethoxylated 2, 4, 7, 9 - tetramethyl-5-decyn - 4, 7 - diol surfactant	.01-1.0
4% aqueous dispersion of clay filler	2-6

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cont

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37. The carpet according to claim 17, wherein the catalyst is an ammonium polyphosphate and the fire retardant spumescent is a melamine.